



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,382	02/03/2006	Ralf Schneider	DNAG-311	3662
24972	7590	05/08/2009		
FULBRIGHT & JAWORSKI, LLP			EXAMINER	
666 FIFTH AVE			ZHENG, LOIS L	
NEW YORK, NY 10103-3198			ART UNIT	PAPER NUMBER
			1793	
			MAIL DATE	DELIVERY MODE
			05/08/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/553,382

Applicant(s)

SCHNEIDER ET AL.

Examiner

LOIS ZHENG

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 35-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 30 March 2009 has been entered.

Status of Claims

2. Claims 35 and 51-57 are amended in view of applicant's amendments filed 27 February 2009. Claims 1-34 are canceled. Therefore, claims 35-57 are currently under examination.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meagher et al. US 2002/0096229(Meagher).

Meagher teaches a process for treating metal surfaces with an aqueous acidic zinc phosphate coating solution (abstract, paragraph [0036]) comprising:

- 0.75-5% of phosphate (paragraph [0022])

- 0.05-2% of Zn (paragraph [0024-25])
- 0.005 – 0.5% of manganese (paragraph [0029])
- Ca and Mg are present from hard water source(paragraph [0035]), but preferably, no more than 0.5% each(paragraph [0045])
- Nitroguanidine (paragraph [0033])
- 0.3-4ppt of chlorate and/or 0.005-0.15ppt of hydrogen peroxide (paragraph [0033])
- 0.25-15ppt, or preferably 0.25-4ppt of complex fluoride such as HBF_4 , H_2SiF_6 , H_2TiF_6 , H_2ZrF_6 , H_2HfF_6 (paragraph [0039-0041]).
- 0.05-5ppt of free fluoride (paragraph [0041])
- 0.05-15ppt of total fluoride (paragraph [0042])
- Free acid ranges from 0.3-10 and total acid ranges from 13-50 (paragraph [0037])

Regarding claim 56, the phosphate, zinc, manganese, Ca/Mg, chlorate/hydrogen peroxide, complex/simple/total fluoride concentrations in the coating solution of Meagher read on the claimed concentrations. The ratio of free acid to total acid calculated from the free acid and total acid ranges as taught by Meagher encompasses the claimed FA/TA ratio. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed FA/TA ratio range from the disclosed range of Meagher would have been obvious to one skilled in the art since Meagher teaches the same utilities in its' disclosed FA/TA ratio range.

In addition, even though Meagher does not explicitly teach the claimed amount of nitroguanidine in the coating solution, one of ordinary skill in the art would have found it obvious to have varied the concentration of nitroguanidine via routine optimization in order to achieve the desired coating formation rate since Meagher teaches nitroguanidine as an accelerator for speeding up the coating formation (paragraph [0033]).

Furthermore, instant claim uses semi-open transitional phrase "consisting essentially of" which includes the presence of other components in the coating solution that do not materially affect the characteristics of the claimed invention. See MPEP 2111.03. In this case if applicant contends that additional materials in the coating solution of Meagher are excluded by the recitation of "consisting essentially of," applicant has the burden of showing that the introduction of additional components in the coating solution of Meagher would materially change the characteristics of applicant's invention. In re De Lajarte, 337 F.2d 870, 143 USPQ 256 (CCPA 1964). See also Ex parte Hoffman, 12 USPQ2d 1061, 1063-64 (Bd. Pat. App. & Inter. 1989).

5. Claims 35-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meagher et al. US 2002/0096229 (Meagher), and further in view of Ishii et al. US 6,231,688 B1 (Ishii).

The teachings of Meagher are discussed in paragraph 4 above. However, Meagher does not explicitly teach the subsequent cold working step as claimed.

Ishii teaches a zinc phosphate conversion coating solution that produces a zinc phosphate conversion coating with improved adhesion and uniformity (col. 1 lines 11-

20). Ishii further teaches that zinc phosphate conversion coating can be applied to metal substrate improve lubrication during cold working(col. 1 lines 22-28).

Regarding claim 35, one of ordinary skill in the art would have found it obvious to have applied cold working to the zinc phosphated metal of Meagher with expected success since Ishii teaches that zinc phosphate conversion coating can be applied to metal substrate improve lubrication during cold working. The remaining claim limitations are rejected for the same reasons as set forth in the rejection of claim 56 above.

Regarding claim 36, Meagher further teaches adding 0.001-1.7% of nitrate to the coating solution(paragraph [0033]), which overlaps the claimed nitrate amount. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed nitrate concentration range from the disclosed range of Meagher in view of Ishii would have been obvious to one skilled in the art since Meagher in view of Ishii teach the same utilities in their disclosed nitrate concentration range.

Regarding claim 37, Meagher further teaches adding 0.01-0.2ppt of nitrite to the coating solution(paragraph [0033]).

Regarding claims 38-39, the ratio of total fluoride to magnesium and the ratio of total fluoride to calcium calculated from the coating solution of Meagher encompass the claimed total fluoride/Mg and total fluoride/Ca ratios. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed total fluoride/Mg and total fluoride/Ca ratio ranges from the disclosed ranges of Meagher in view of Ishii would have been obvious to one skilled in the art since Meagher in view of Ishii teach the same utilities in their disclosed total fluoride/Mg and total fluoride/Ca ratio ranges.

Regarding claim 40, Meagher further teaches adding 0.01-0.2% of nickel to the coating solution (paragraph [0029]).

Regarding claims 41-42, since the instant claims include zero amounts of chloride and sulfate ions, the coating solution of Meagher, although does not specifically include chloride or sulfate ions, still meets the limitations of the instant claims.

Regarding claims 43-45, Meagher teaches the claimed BF_4 in an amount that either reads on or significantly overlaps the claimed BF_4 concentration ranges. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed BF_4 concentration range from the disclosed range of Meagher in view of Ishii would have been obvious to one skilled in the art since Meagher in view of Ishii teach the same utilities in their disclosed BF_4 concentration range.

Regarding claim 46, Meagher teaches that its coating solution is acidic (paragraph [0036]), which encompasses the claimed pH range of 0.1-4. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed pH range from the disclosed range of Meagher in view of Ishii would have been obvious to one skilled in the art since Meagher in view of Ishii teach the same utilities in their disclosed pH range.

Regarding claims 47-49, Meagher further teaches that its coating process produces a phosphate coating having a layer weight of $1.6\text{-}10\text{g/m}^2$ (paragraph [0055]). In addition, Examples of Meagher shows that the phosphate crystals in the coating of Meagher is measured less than 20 or even less than 10 microns (Table 6). Furthermore, since coating layer thickness depends on duration of the coating treatment

(i.e. the longer the coating treatment duration, the thicker the coating layer) and the level of corrosion protection desired(i.e. the thicker the coating layer, the better/longer the corrosion protection), one of ordinary skill in the art would have found it obvious to have varied the coating layer thickness by varying the coating treatment time via routine optimization in order to achieve the desired level of corrosion protection.

Regarding claim 50, Ishii further teaches applying a lubricant to the zinc phosphate conversion coated surface to improve the lubricating properties of the conversion film to support cold working(col. 9 lines 35-38). Therefore, it would have been obvious to one of ordinary skill in the art to have incorporated the application of an additional lubricant layer as taught by Ishii to the conversion coated surface of Meagher in view of Ishii in order to improve the lubricating properties to support cold working as taught by Ishii.

Regarding claim 51, the rejection of FA/TA ratio is set forth in the rejection of claim 1 above. In addition, Meagher further teaches that the coating solution should not contain large amount of free fluoride since large amount of free fluoride promotes etching of the substrate(paragraph [0040]), Therefore, deriving from this particular teaching from Meagher, the examiner concludes that the coating solution of Meagher does not excessively etches the substrate and the inherent ratio of the pickling erosion on the metal surface to the layer weight is less than 75% as claimed.

Regarding claim 52-53, the instantly claimed coating composition and coated/cold worked metal object do not distinguish from the coating composition and

the coated/cold worked metal object as taught by Meagher in view of Ishii for the same reasons as set forth in the rejection of claims 35-36 and 56 above.

Regarding claim 54, the instant claim is rejected for the same reasons as set forth in the rejection of claims 35 and 56 above.

6. Claims 55 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii.

The teachings of Ishii are discussed in paragraph 5 above.

Ishii further teaches a process for treating metal surfaces with an aqueous acidic zinc phosphate coating solution (abstract, col. 7 lines 28-31) comprising:

- 5-30g/l of phosphate (col. 7 lines 17-19)
- 0.5-15g/l of Zn (col. 6 lines 48-53)
- 100-3000ppm of supplementary metal ions such as manganese, magnesium and calcium(col. 8 lines 33-42)
- 50-1500ppm of organo-peroxide (col. 8 lines 1-9)
- Free fluorides such as hydrofluoric acid and complex fluoride such as H_2SiF_6 , H_2TiF_6 , H_2ZrF_6 (col. 8 lines 52-61), wherein examples of Ishii uses 100ppm of fluoride ions(col. 12 line 56)
- pH of 2.0-4.0(col. 7 lines 28-31)

Regarding claims 55 and 57, even though Ishii teaches that accelerator such as nitroguanine cannot not be formulated as a concentrate and provides poor control for the divalent iron ions in the conversion coating solution(col. 2 lines 21-27), Ishii's teaching implies that nitroguanine is an accelerator that can be used in a diluted

working conversion coating solution that does not contain iron ions(i.e. such as conversion coating solution that applies to aluminum surfaces). Therefore, one of ordinary skill in the art would have found it obvious to have incorporated nitroguanine into the coating solution of Ishii applied to non-ferrous metal substrate with expected success. In addition, one of ordinary skill in the art would have varied the concentration of nitroguanine in the coating solution of Ishii via routine optimization in order to properly accelerate the coating process to desired coating speed.

In addition, other component concentration ranges as taught by Ishii overlap the claimed component concentrations. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed component concentration ranges from the ranges disclosed in Ishii would have been obvious to one of ordinary skill in the art since Ishii teach the same utilities in its component concentration ranges.

Regarding the claimed FA/TA ratio, since Ishii teaches a zinc phosphate conversion coating solution that is very similar to the claimed conversion coating solution having the same pH as the claimed conversion coating solution, one of ordinary skill in the art would have found the coating solution of Ishii to have very similar FA/TA values as claimed.

Furthermore, since all other components in the coating solution of Ishii are optional components, the examiner concludes that the coating solution of Ishii meets the limitation of the close-ended transitional phrase "consisting of".

7. Claims 35-42 and 46-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/36183, whose corresponding English equivalent is Bartik-Himmler et al. US 6,627,006 B1(Bartik-Himmler), and further in view of Ishii.

Bartik-Himmler teaches a process for treating metal surfaces with a phosphate coating solution comprising:

- 3-30g/l of phosphate (col. 4 lines 1-2);
- 0.3-3g/l of Zn (col. 4 lines 1-2);
- 0.1-4g/l of Mn(col. 4 line 23);
- 0.2-2.5g/l of Mg(col. 4 line 25);
- 0.2-2.5g/l of Ca(col. 4 line 26);
- 0.1-3g/l of nitroguanidine(col. 5 line 9);
- 1-70mg/l of hydrogen peroxide (col. 6 line 6);
- Free and complex fluoride in a total of up to 2.5g/l, of which up to 800 mg/l is free fluoride(col. 4 lines 41-45);
- Less than 0.5g/l of nitrate(col. 5 lines 13-18);
- 0.01-0.2g/l of nitrite(col. 5 line 6);
- Free acid between 0 and 1.5 points and total acid between about 15 and about 30 points; and
- pH of about 2.8 to about 3.8(col. 4 lines 2-4).

However, Barik-Himmler does not explicitly teach that the complex fluoride is fluoride of Si, Ti, Hf and/or Zr as claimed. Barik-Himmler also does not teach the subsequent cold forming step as claimed.

The teachings of Ishii are discussed in paragraphs 5-6 above.

Regarding claims 35-39, 46 and 52-53, it would have been obvious to one of ordinary skill in the art to have used complex fluorides such as H_2SiF_6 , H_2TiF_6 , H_2ZrF_6 as taught by Ishii in the coating solution of Barik-Himmler with expected success since Ishii teaches such complex fluorides suitable in a phosphate coating solution.

In addition, one of ordinary skill in the art would have found it obvious to have applied cold working to the zinc phosphated metal of Barik-Himmler with expected success since Ishii teaches that zinc phosphate conversion coating can be applied to metal substrate improve lubrication during cold working.

Furthermore, the coating process of Barik-Himmler in view of Ishii is significantly similar to the claimed coating process because the coating component concentrations, the inherent total fluoride to magnesium or calcium ratios, the coating pH and FA/TA ratio either read on, or overlap the claimed coating component concentrations. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05. The selection of claimed coating component concentration ranges, the claimed total fluoride to magnesium or calcium ratios, the claimed pH and the claimed FA/TA ratio from the disclosed ranges of Barik-Himmler in view of Ishii would have been obvious to one skilled in the art since Barik-Himmler in view of Ishii teach the same utilities in their disclosed ranges.

Regarding claim 40, Barik-Himmler further teaches that nickel can be added in an amount of 0.1-2.5g/l(col. 4 line 24), which significantly overlap the claimed Ni

concentration. Therefore, a prima facie case of obviousness exists. See MPEP 2144.05.

Regarding claims 41-42, since claimed chloride and sulfate concentration can be as small as zero, the examiner maintains that the coating solution of Barik-Himmler in view of Ishii meets the limitation of the instant claims.

Regarding claims 47-49, Bartik-Himmler further teaches a phosphate coating layer of a few μm (col. 3 lines 44-48). In addition, since coating weight depends on duration of the coating treatment (i.e. the longer the coating treatment duration, the heavier the coating weight) and the level of corrosion protection desired(i.e. the heavier the coating layer, the better/longer the corrosion protection), one of ordinary skill in the art would have found it obvious to have varied the coating weight by varying the coating treatment time via routine optimization in order to achieve the desired level of corrosion protection. In addition, since Barik-Himmler in view of Ishii discloses a coating process that is substantially similar to the claimed coating process, one of ordinary skill in the art would have expected that the coating process of Barik-Himmler in view of Ishii to produce a coating layer with claimed phosphate crystal size.

Regarding claim 50, Ishii further teaches applying a lubricant to the zinc phosphate conversion coated surface to improve the lubricating properties of the conversion film to support cold working(col. 9 lines 35-38). Therefore, it would have been obvious to one of ordinary skill in the art to have incorporated the application of an additional lubricant layer as taught by Ishii to the conversion coated surface of Barik-

Himmler in view of Ishii in order to improve the lubricating properties to support cold working as taught by Ishii.

Regarding claim 51, the rejection of FA/TA ratio is set forth in the rejection of claim 1 above. In addition, since Barik-Himmler in view of Ishii discloses a coating process that is substantially similar to the claimed coating process, one of ordinary skill in the art would have expected that the coating process of Barik-Himmler in view of Ishii also would not excessively etches the substrate and the inherent ratio of the pickling erosion on the metal surface to the layer weight is less than 75% as claimed.

Regarding claims 54-57, since components such as nitrate and nitrite ions as taught by Barik-Himmler are optional components, the examiner concludes that the coating process of Barik-Himmler in view of Ishii is significantly similar to the claimed coating process wherein the coating component concentrations significantly overlap the claimed coating component concentrations. Therefore, a prima facie case of obviousness exists for the same reasons set forth in the rejection of claims 35, 54 and 56 above. See MPEP 2144.05. The selection of claimed coating component concentration ranges from the disclosed ranges of Barik-Himmler in view of Ishii would have been obvious to one skilled in the art since Barik-Himmler in view of Ishii teach the same utilities in their disclosed coating component concentration ranges.

8. Claims 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartik-Himmler in view of Ishii, and further in view of Meagher.

The teachings of Bartik-Himmler in view of Ishii are discussed in paragraph 7 above. However, Bartik-Himmler in view of Ishii do not explicitly teach the claimed fluoroborate.

The teachings of Meagher are discussed in paragraph 4 above.

Therefore, one of ordinary skill in the art would have incorporated HBF_4 as taught by Meagher into the coating solution of Bartik-Himmler in view of Ishii with expected success since Meagher teaches HBF_4 , H_2SiF_6 , H_2TlF_6 , H_2ZrF_6 , H_2HfF_6 are functionally equivalent complex fluorides that are suitable for use in a phosphate coating solution.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 35-46, 50-52 and 54-57 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 27-

28, 31, 34-37, 39-41 and 46-53 of copending Application No. 10/555,929. Although the conflicting claims are not identical, they are not patentably distinct from each other because copending Application No. 10/555,929 teaches a process, a coating composition and a coated metal object that is substantially the same as claimed due to its significantly similar coating composition.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

11. Claims 35-57 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 41-42, 46-56, 59-60, 62-63, 67-75 of copending Application No. 10/467,850. Although the conflicting claims are not identical, they are not patentably distinct from each other because copending Application No. 10/467,850 teaches a process, a coating composition and a coated metal object that is substantially the same as claimed due to its significantly similar coating composition.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

12. Applicant's arguments filed 27 February 2009 are fully considered, but they are not persuasive.

In the remarks, applicant argues that Meagher includes cobalt in its coating solution, but the instant claims do not require cobalt.

Independent claims 35 and 52 use open-ended transitional phrase "comprising" which allows the presence of additional components in the coating solution, such as cobalt of Meagher. Independent claims 54 and 56 use semi-open-ended transitional phrase "comprising essentially of", which allows presence of additional components, such as cobalt of Meagher, in the coating solution so long as the addition components do not materially affect the claimed invention. Therefore, the presence of cobalt in the coating solution of Meagher is not excluded by the instant claims.

Applicant further argues that Meagher does not teach that its coating solution is used in a cold forming process as intended in the present application.

The examiner does not find applicant's argument persuasive because most of the claims do not positively recite an additional cold forming step.

Applicant further argues that Ishii is concerned with long-term corrosion resistant coating much thinner than coating of the instant invention intended for cold forming.

The examiner does not find applicant's argument convincing because Ishii also teaches that zinc phosphate coating can be applied to a metal surface to improve lubrication during cold working and its coating process produces a conversion coating layer that supports cold working(col. 1 lines 22-28, col. 3 lines 7-11, col. 9 lines 29-31).

Applicant further argues unexpected results achieved from the instant invention with the addition of nitroguanidine and discussed results from examples and comparative examples from the instant specification.

The examples and comparative examples from the instant specification are not sufficient to show unexpected results due to the addition of nitroguanidine because the

prior art references Meagher, Ishii and Bartik-Himmler also teach addition of nitroguanidine in their phosphate coating solutions. It is well settled that the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. Ex parte Obiaya, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). See MPEP 2145 [R-6] II. In this case, applicant has recognized additional advantages associated with the presence of nitroguanidine in a phosphate conversion coating and these advantages would have flow naturally from the coating solutions of Meagher, Ishii and Bartik-Himmler.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mayer et al. US 6,379,474 B1 teaches a zinc phosphate coating composition that is very similar to the claimed coating composition.

Wietzoreck et al. WO 01/66826, whose English equivalent is US 7,208,053 B2, teaches a zinc phosphate coating composition that is very similar to the zinc phosphate solution as recited in claims 55 and 57, having a 50-300g/l of phosphate.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LOIS ZHENG whose telephone number is (571)272-1248. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art
Unit 1793

LLZ